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AUTHOR DiBlassio, Jamie; Simonin, Danielle; DeCarolis, Anthony; Morse, Laura; Jean, James; Vassalotti, Lauren; Franks, Kristin; Chambliss, Catherine

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ABSTRACT

The development of the Internet offers an entirely new means of providing psychological healthcare and access to psychological information. For mental healthcare consumers who possess the necessary cognitive and computer skills, as well as the access to the proper equipment, the Internet literally opens up a world of treatment possibilities previously unimaginable. For consumers who are introverted, confined to the home, or for when privacy is a priority, these remote forms of treatment and sources of information are extremely attractive. Unfortunately, the quality of these sites is not regulated and varies extensively. The absence of regulatory measures could result in misleading and potentially harmful effects. This study provides comparative data describing the quality of 775 Internet services currently available to those affected by different disorders and or seeking information related to behavioral healthcare. A rating scale was used to assess six dimensions of site quality including accuracy and practicality of information, emphasis on normalization, sense of belonging, referral, and feedback mechanisms. Four categories of behavioral healthcare sites examined were parenting problems, health problems, common emotional disorders (anxiety), and severe mental illness. One-way analysis of variance revealed significant differences in quality ratings across the four categories. Results are presented and discussed. (Author)

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EDUCATIONAL RESOURCES AVAILABLE ON THE INTERNET: ASSESSING THE QUALITY OF PSYCHOLOGICAL HEALTHCARE SITES

Jamie DiBlassio, Danielle Simonin, Anthony DeCarolis
Laura Morse, James Jean, Lauren Vassalotti
Kristin Franks and Catherine Chambliss, Ph.D.

Ursinus College

1999

Abstract

The development of the Internet offers an entirely new means of providing psychological healthcare and access to psychological information. For mental healthcare consumers who possess the necessary cognitive and computer skills, as well as the access to the proper equipment, the Internet literally opens up a world of treatment possibilities previously unimaginable. For consumers who are introverted, confined to the home, or for when privacy is a priority, these remote forms of treatment and sources of information are extremely attractive. Unfortunately, the quality of these sites is not regulated and varies extensively. The absence of regulatory measures could result in misleading and potentially harmful effects. This study provides comparative data describing the quality of 775 Internet services currently available to those affected by different disorders and or seeking information related to behavioral healthcare. A rating scale was used to assess six dimensions of site quality including accuracy and practicality of information, and the site's provision of normalization, sense of belonging, referral, and feedback mechanisms.

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Introduction

The Internet offers new and exciting opportunities to improve delivery of mental healthcare and enhance the lives of those affected by brain and behavioral disorders. The new electronic information technologies are fostering revolutions in how direct services are provided, and also facilitating optimal care indirectly, by keeping professionals more up-to-date and allowing larger-scale research on treatment effectiveness.

Innovations in direct service delivery include the development of problem-specific lists that create de facto support groups, expert-mediated Websites that offer everything from virtual milieu therapy to parenting advice and electronic individual psychotherapy with therapists a nation away. For consumers who are introverted, homebound, or for when privacy is a priority, these remote forms of treatment are extremely attractive. For those with the requisite cognitive and computer skills and the access to appropriate equipment, the Internet literally opens up a world of treatment possibilities previously unimaginable. The result is a growing optimism among treatment professionals concerning the future possibilities for the Internet. Sampson et al., (1997) envision the future "information highway" as providing clients in remote locations with access to a variety of specialists that would otherwise be unavailable. They predict that Internet therapy will consist of a combination of counseling sessions by means of video conferencing and computer assisted instruction.

Unfortunately the use of the Internet does not only open up new possibilities; it also creates new problems. In fact, the interaction of counselors and clients by means of electronic media presents legal and ethical problems, including confidentiality. Regardless of this problem, the use of the Internet as a supplement to traditional methods of counseling is a worthwhile endeavor. If counseling is defined as "a learning process designed to help people learn more effective ways of coping with their emotional, social, and career problems" (Sampson & Krumboltz, 1991), then the use of the Internet as a means of disseminating information is valid.

In April 1996, Sampson, Kolodinsky, and Greeno (1997) sought to determine the prevalence of these resources on the Internet. Using the WebCrawler search engine they conducted a search of the word counseling. The results of this search showed the existence of 3,764 home pages containing that term. Further analysis of these pages showed that 45% of these sites pertained to psychological counseling and the rest were either not accessible or merely contained the word counseling somewhere in their text. Sampson et al. repeated this search in the same search engine only three months later and discovered that the number of home pages had grown to 4,584. That is a 15% increase in three months. It is virtually impossible for both consumers and professionals to keep up with this rapid growth.

Much of the existing literature pertaining to the Internet within the field of psychology is descriptive in nature. The main focus of journal articles has been placed on the problems and technological limitations associated with the current Internet (e.g., Sampson et al., 1997; Allen & Kostenbader, 1995; Frisse et al., 1994) and projections about its eventual utility (e.g., Huang & Alessi, 1996; Sampson et al., 1997). The subject of the Internet as it is currently employed is given little attention.

The recent explosion of behavioral healthcare resources on the Net has left many

consumers and professionals overwhelmed. The Quality of Websites and lists is very uneven; no systematic mechanism exists to evaluate the utility of a given resource efficiently. Jacobson and Cohen (1997) have discussed the importance of teaching students to evaluate the quality of Internet sites. They argue that users of sites should consider all the dimensions of accuracy, comprehensiveness, currency, availability of hyperlinks, and the website's style and functionality. Doran et al. (1998) and Morse et al (1998) found inconsistencies in quality across different categories of psychological sites. The current study extended this earlier work and examined the differential quality of four categories of behavioral healthcare sites on the Internet.

Parenting Problems

ADHD/ADD

Attention-Deficit Disorder and Attention-Deficit/Hyperactive Disorder, otherwise known as ADD and ADHD, have created a great deal of confusion and controversy among researchers and families. According to the Diagnostic and Statistical Manual of Mental Disorders IV, the prevalence of AD/HD is estimated at 3%-5% in school aged children. According to an estimate by the National Institute of Mental Health, about one student in every classroom is believed to experience it (Newsweek, 1996). Evidence also show that 10 to 60 percent of young adults who possess AD/HD possessed the disorder as children (American Family Physicians, 1996). Due to increasing diagnosis of the disorder, many critics, scientists, families, and doctors are also raising questions about whether the disorder is being over-diagnosed. In addition, some are raising questions on whether children are being misdiagnosed and over medicated. Many parents believe that AD/HD can and should be treated without drugs. Furthermore, many have placed the emphasis on the fact that heavy medications such as Ritalin should not be given to children. Others believe that the medications that are being prescribed are justified and are working wonders with their children.

According to the DSM IV, AD/HD has three subtypes. Diagnosis for any of the three subtypes requires six or more of the given symptoms for the individual subtype. Moreover, the symptoms must be present and persist for at least six months to a degree that is maladaptive and inconsistent with developmental level (DSM IV). The first subtype is the predominantly inattentive type. The behavioral symptoms for this type as listed in DSM IV, are as follow: (a). Failure to give close attention to details, or make careless mistakes in schoolwork, or other work related activities. (b). Difficulty maintaining attention in tasks or play. (c). Often does not seem to listen when being spoken to. (d). Doesn't follow instructions and fails to complete tasks and chores. (e). Shows difficulty with organizational tasks. (f). Avoids or dislikes tasks that require focus and concentration. (g). Often loses necessary things that are needed to complete activities and tasks. (h). Often easily distracted by extraneous stimuli. (i). Often forgetful in activities. The symptoms for the second subtype known as hyperactivity-impulsivity as listed in DSM IV, are as follows: (a). Often fidgets with hands and or feet. (b). Inability to remain seated. (c). Often runs about and climbs on things. (d). Often show difficulty with playing or leisure activities. (f).

Often talks excessively. (g). Blurts out answers to questions when advised no to. (h). Often has difficulty awaiting turn. (i). Often interrupts others. The third subtype is known as the combined type. As stated in the DSM IV, this subtype can be used when six or more symptoms of inattentive and six or more symptoms of hyperactivity-impulsivity are present and persist for at least six months.

As a result of the symptoms associated with the disorder, many children often suffer academically as well as socially. The relationship between AD/HD and academic underachievement has been persistent for quite sometime. One of the categories that AD/HD was formerly classified under was "Learning Disorders." Previously known as Hyperkinetic Reaction of Childhood and Adolescence, AD/HD has become America's No. 1 childhood psychiatric disorder (Newsweek, 1996). Many researchers have conducted studies comparing the two subtypes ADD and ADHD in order to determine whether there is a difference in academic performance between the two subtypes. In a study conducted to measure underachievement in the two subtypes, consistent with previous studies, Marshall et al., found that students with ADD showed significantly lower math scores than students who has ADHD (1997).

As the number of diagnoses increase, so must the drug treatment for the disorder. In comparison to the early nineties, sales of the substance Methylphenidate, more popularly referred to as Ritalin, has shot up more than 500 percent (Scientific American, 1996). The stimulant is said to increase the level of dopamine in the frontal lobe of the brain, where it regulates attention and impulsivity (Newsweek, 1996). The number of students that are said to be using the chemical substance is 5 to 6 percent of all boys in the United States (Scientific American, 1996). As a result of these statistics, skeptics believe that many doctors are misdiagnosing patients and providing them with medications that are unnecessary simply because they believe that it is a miracle drug. James Swanson of the University of Massachusetts states that, "The number of cases has more than doubled in the past five years, and so the chance that overdiagnosis is occurring needs to be considered (Scientific American, 1996)." Swanson goes on to state what many pediatricians and psychiatrists are providing as an explanation for an increase in diagnoses and treatment, which is that treatment is just now catching up to prevalence (Scientific American, 1996). In contrast, some doctors believe that the drug is being overprescribed. Dr. Peter S. Jensen, chief of the Child and Adolescent Disorder Research Branch of NIMH believes that, "ADHD is suffering from the 'disease of the month' syndrome (Newsweek, 1996)."

Dr. Laurence Greenhill of Columbia University Medical School, says pharmaceutically, "Ritalin is a raving success in psychiatry (Newsweek, 1996)." With this form of publicity, many people are pursuing the drug without the disorder, so as to reap the benefits and increase their academic performance in school. For example, doctors are reporting that they are being asked by parents to prescribe the medication for their children in order for them to achieve higher grades in school (Newsweek, 1996). If one doctor refuses to prescribe the medication, it is quite easy to find another doctor who will (Newsweek, 1996).

With the presence of the Internet increasing so rapidly, many parents turn to the Internet for help with almost anything. With so many web sites on so many subjects, it is almost guaranteed that whatever subject you are looking for, a relevant web site can be

found. With such a vast array of information and material, it is almost impossible to control or modify it. When faced with problems with their children, sometimes parents will turn to the Internet for helpful information on what they should do. Since these Internet sites are not edited before being placed for usage, any false material will be taken as correct information to viewers who are unaware of this information. This study looked at AD/HD and other disorders, and evaluated the help web sites that were placed over the Internet for usage. This study was designed to find web sites that provided information to the public on AD/HD along with the other disorders, and rate them for correctness and helpfulness. Achieving such knowledge would allow the public to know which sites on the Internet they could visit if they need help on a particular disorder.

Tourette Syndrome

Tourette Syndrome (TS) is a childhood neuropsychiatric disorder characterized by sudden, rapid, recurrent, nonrhythmic, involuntary motor movements or vocalizations. The onset of TS occurs before the age of eighteen, but is most frequently seen between the ages of two and fifteen years. TS was once thought to be a rare condition but now affects more than 200,000 people in the United States. Furthermore, TS is now found to exist in one out of every 1,000 boys and one in every 10,000 girls (Cohen 1994). Tics are the major characteristic of this disorder, and they periodically change in frequency, type, location and severity (Bruun 1994).

The tics that are associated with TS may be simple or complex. Simple tics are meaningless while complex tics make use of more than one muscle group and seem to have a meaning. The first symptom that occurs in TS patients is usually a facial tic. Simple motor tics include eye blinking (the most commonly seen tic which develops in 80% of TS patients), neck jerking, shoulder shrugging, and facial grimacing. Simple vocal tics are coughing, grunting, sniffing, snorting, and barking. On the other hand, complex motor tics consist of jumping, smelling, stamping, twirling, and deep knee bends while walking. In addition, complex vocal tics include copralilia (socially unacceptable or obscene language or sounds), echolalia (repetition of the previous speaker's last sound, word, or sentence), and palilia (repetition of one's own last sound, word, or sentence) (Shapiro 1989).

There is an unfolding of symptoms in the tic disorders. During the first few years, the symptoms are hardly detectable and there tends to be a gradual onset. The disorder starts with a single tic or with a compulsion and slowly elaborates over the years into more complex symptoms (Cohen 1994). At first, children are unaware of their symptoms, but after a few years they realize the disorder, at which point they attempt to suppress the tics. The symptoms are involuntary and eventually must be expressed, as with the urge to sneeze. Often times the person with TS may try to delay their tics from occurring at work or at school only to cause more severe tics to occur later. Tics may be more severe in the presence of family and friends, with increased stress and anxiety (Shapiro 1989). They decrease in the morning, when doing absorbing activities, and also

during sleep (Bruun 1994).

Tourette Syndrome is a genetically transmitted disorder where parents have a 50% chance of passing the gene on to their children. In regards to the gene associated with TS, girls have a 70% chance of showing symptoms while boys have a 99% chance of showing symptoms. In one family study, 8% of the TS patients had one or more family members with a tic disorder. For monozygotic twins, if one child has TS there is an 80% chance that the other will have the disorder as well (Blanchard & Michultka 1989). Although research continues on the disorder, it is believed that the abnormal metabolism of the neurotransmitter, dopamine, aggravates symptoms. According to Blanchard and Michultka (1989), symptoms of TS seem to be the result of a dysfunction in the dopaminergic and serotinergic systems.

Although pharmacological treatment is the most common because of the biological basis of TS, it should not be the only method explored for treating TS. Medications alone do not allow the family and patient to learn how to cope with the disorder. In addition, there are also harmful side effects that accompany certain medications. According to Bruun (1994), the effects can be a blunted effect and functioning (dazed and tired), tardive dyskinesia (rabbit-like facial twitch), or a rebound symptom which occurs when medication is terminated (tics worsen). Hence, these side effects can be almost as embarrassing as the tics themselves and the patient is not taught how to deal with that. Furthermore, research reveals that drugs only control about 50% of the tics (Bruun 1994).

Many different treatments have been tested for TS. Medication, relaxation training, self monitoring, and habit reversal have all been tried out. Pharmacological treatment seems to be the most common. However, due to the adverse side effects, other methods are being implemented. As a result, one such treatment that is being used instead is relaxation training. This involves instruction in the practice of progressive muscular relaxation. On the contrary, self-monitoring gives instruction on how to increase the individual awareness of the type of frequency of tics that occur. Furthermore, habit reversal consists of identification of a competing response (Blanchard, Michultka, & Rosenblum 1989). Overall taking into account all of these different approaches, behavioral procedures have been shown to reduce symptoms by approximately 45%. Habit reversal itself has been found to reduce individual tics by 90% according to various studies (Azrin 1992). Habit reversal may provide an alternative to drug treatment. It seems as though this type of treatment may be a step in the right direction because it does not have side effects and the propaganda looks good.

Emotional stress is a big factor for patients with TS. Tourette's patients are not able to relax "like other people" (Bruun 1994). Many children with TS are said to have poor peer relations (Carter 1994). A child who tics because they do not understand what is going on may turn off children who are viewed by society as "normal". Moreover, even if the child with TS is on medication, they may be ridiculed and laughed at because of the twitching that the medication causes.

Recent studies have indicated that there is a confusion in the relationship between

Tourette's Syndrome and Obsessive-Compulsive Disorder (OCD). Although the relationship between OCD and TS is not yet clear, the association between the two behaviors is accepted (Cath 1992). According to the DSM-IV Manual, OCD is an anxiety disorder characterized by obsessions. Obsessions are repetitive thoughts about something that produces anxiety. OCD is also characterized by compulsions which are behaviors carried out to neutralize obsessional ideas. Approximately 30% to 60% of TS patients develop obsessional thoughts and compulsive rituals after several years (Cohen 1994). Both of the disorders are characterized by repetitive behavior. Studies by Steingard (1992) indicate that TS patients exhibit obsession-compulsive-like symptoms. These symptoms may be an impulsion in Tourette's patients that "sets the mind in motion" (Cath 1992). It is 55% or 74% more likely to see OCD in TS patients than to see TS in OC patients, which is only 5% to 7% (Brant 1998).

Tourette Syndrome and OCD are similar in that for both disorders the symptoms fluctuate in severity over time, and they have temporary remissions and possible improvements. In TS patients, vocal tics and OCD have a later onset (Steingard 1992). Various motor and vocal tics, symptoms of TS, are involuntary and partially suppressible symptoms. On the other hand, compulsions are intentional or voluntary in order to prevent or produce a future situation (Shapiro 1989).

There are repetitive phenomena seen in TS patients that should not be considered as OCD symptoms because of the differences in meaning behind the behaviors (Cath, 1992). The difference between the two disorders is in TS patients, some of the repetitive cognitive behaviors, such as mental thinking and counting, are aimless and neutral, whereas, for OCD patients, the mental thinking and counting are directed towards decreasing anxiety and fear. Therefore, this phenomenon of mental thinking and counting should not be diagnosed as obsessive-compulsive behavior in TS patients (Cath 1992).

In family studies, it has been revealed that patients with either TS or OCD have a greater number of family members with the other disorder (George 1993). Some say that there may be a common gene that is affected, linking OCD with TS. The difference between TS patients with obsessive-compulsive symptoms (OCS) and OCD alone is that TS patients claim that their compulsions just occur. In contrast to this, OCD patients claim that their compulsions are preceded by guilt or worry (George, 1993).

Autism

Autism is a rare neurological disorder marked by severe impairment in social, emotional, and intellectual functioning, typically diagnosed around age three. Autistic syndromes are variously referred to as childhood autism, infantile autism, autistic disorder, pervasive developmental disorder, and childhood psychosis. The basic criteria include abnormal social relatedness, abnormality of communication development, repetitive patterns of behavior, and abnormal stimuli responses (Edelson, 1997). Autistic

individuals also have difficulty in seeking comfort, imitating others, and participating in imaginative activities.

The cause of autism is still unknown; however, there are varied theories as to what induces this behavioral syndrome. One theory postulates a genetic factor in autism; supportive research shows a higher concordance rate among monozygotic twins than dizygotic twins. Biological children of autistic individuals are at increased risk for the disorder. Researchers in Utah examined 11 families in which the father had autism, and out of the 44 offspring, 25 of the children had autism or autistic tendencies (Edelson, 1997). Autism occurs in siblings of autistic children 2.7% of the time, and autistic traits will often show up mildly in the parents, siblings, and other relatives of the autistic child (Wolf-Schein, 1997; Noreen et al., 1990; Landa et al., 1992).

Children with autism also have structural abnormalities in their brains. The limbic system is immature, which causes problems with emotions, aggression, and learning. The transmission of nerve impulses through the brain is also abnormally slow (McClelland et al., 1993). Courchesne (1995) found two areas of the cerebellar vermis to be extremely small in 86% of autistic subjects and abnormally large in 12% of autistic subjects. Due to these abnormalities, the children may have deficient ability to focus their attention to follow the verbal cues that signal changes in social communication (Wolf-Schein, 1997).

Autistic individuals also differ from others in terms of neurotransmitter activity. Research suggests that they have unusually high levels of serotonin and beta-endorphins (Panksepp, 1979). The fact that autistic children appear to have a higher pain threshold could be due to these elevated levels of beta-endorphins, which are opiate-like substances in the body that allow tolerance of pain. There is also evidence consistent with a possible viral etiology. If a female is exposed to rubella during her first trimester of pregnancy, then she has an increased risk of having of child with autism (Edelson, 1997).

Concerns about environmental precursors to autism include the possible effects of toxins and pollution on the developing child. In Leomenster, Massachusetts, there is a high prevalence of autism surrounding a particular manufacturing factory. The highest percentage of cases were found in the homes down wind from the plant smokestacks (Edelson, 1997).

Cognitive conceptualizations of autism see the disorder as a defect impairing the highest level of cognitive processing (Frith, 1993; Wolf-Schein, 1996). This defect results in autistic children not being able to think about mental states, such as beliefs and the perspective of others (Baron-Cohen, Lesile & Frith, 1986). When autistic children were handed pictures of people to sequence, they did poorly because in order to complete the sequence correctly they had to comprehend the beliefs of others.

A more recent theory on the cause of autism concentrates on a link between allergies and behaviors. Autistic children have metabolic difficulties with gluten or wheat products, and casein or milk products. Research theorists have proposed that abnormal functioning of opioid peptides promote the emergence of autistic symptoms. Analysis of

24 hour urine samples from children with autism have shown increased levels of peptides (Reichelt et al., 1986). These peptides, which are short chains of amino acids, derive from the incomplete digestion of gluten, which breaks down into gluteomorphins, and of casein, which breaks down into casomorphine. For most people, the digestion of proteins occurs through the intestines, however, for the autistic child this digestion is incomplete and results in the characteristic traits of the disorder. Most of the peptides are released through the urine, but a small amount still manage to escape into the blood stream and cross into the brain, which is hypothesized to alter normal brain transmission (Lewis, 1994). After researchers discovered the possible contribution that gluten made to autistic symptoms, many families removed gluten from their children's diet. The link between allergies and autistic behaviors has begun to receive a great deal of attention, not just as an intervention tool but also as a possible preventive measure. The diet however should not be a substitute for a previous treatment method, but rather a supplement and additional tool (Knivsberg et al, 1995).

Several competing intervention strategies have emerged over the years. A majority of these interventions have met limited long term success (DeMeyer, Hingten, & Jackson, 1981; McEachin, Smith & Lovaas, 1993). However, research has consistently supported the use of intensive behavioral intervention in the treatment of autism (Lovaas, 1987; McEachin et al, 1993). The applied behavioral analysis program, developed by O. Ivar Lovaas, has produced favorable and long-lasting results, and has been reported as having the best outcomes among all current methods (CSAAC, 1997). The outcomes of O. Ivar Lovaas indicate 47% of the children who participate in this intensive intervention program will achieve normal IQ and educational placement evaluations. The children who are unable to achieve the normal intellectual levels still improve in general intellectual areas. Even the smallest improvement for these children allows learning to take place in less restrictive environments and classrooms (CSAAC, 1997).

Dr. Theodore Shapiro and Dr. Margaret Hertzig (1995) of the New York Hospital-Cornell Medical Center, claim that the outcomes of this method are astonishing. After two siblings took part in the applied behavioral analysis program of Dr. O. Ivar Lovaas, they no longer fit the diagnostic criteria for autism and they no longer displayed the social, personal, and language difficulties that accompany this disorder.

A study examining the long term outcome for autistic children who had received early intervention behavioral treatment revealed evidence of continued achievement over time, and significant enduring intellectual gains (McEachin, Smith, & Lovaas, 1993). These researchers took a group of 19 autistic children, under the age of four years old, and provided them with forty hours of behavioral treatment for two years. When the children reached the age of seven, they were re-evaluated. The children had gained an average of 20 IQ points, and nine out of the nineteen had completed first grade. The control group for the study consisted of forty untreated autistic children. When re-evaluated, only one out of the forty control group participants had reached a normal level of intellectual functioning. The results of the study showed that those who had

received the early intervention continued to surpass members of the control group (McEachin, Smith,& Lovaas, 1993). This behavioral approach is now considered to be the most popular and effective educational treatment for autism. This treatment provides concrete criteria for measuring skill mastery. Behavior of children participating in this treatment is evaluated systematically, permitting detection of subtle changes in the rate of achievement over time.

The discrete trial is the basic three-part teaching unit used in the applied behavioral analysis program to maximize learning in developmentally disabled children. The discrete trial consists of the discriminative stimulus, the response, and the reinforcing stimulus. Through the use of these trials, along with reinforcement, prompting, and shaping, this program allows the modification of unwanted behaviors. The approach itself includes procedures that emphasize behavior enhancement and behavior reduction (Campbell, Schopler, Cueva, & Hallin, 1996). A central belief of this method is that reinforcement that enhances or reduces the behaviors should be contingent upon the behavior targeted. Therefore, the child should not be able to obtain the reward through other means or at other times besides therapy.

In order for a specific treatment plan to be created for the child, a detailed analysis of the relationship between the child and the environment takes place. From this point, the drills are chosen in order to strengthen or eliminate particular behaviors.

This behavioral treatment is extremely time consuming, and involves both the participation of family members and competent therapists. Overall, this early intervention program is aimed at enhancing the intellectual and social skills of these children so that they will be able to take care of themselves as they grow older, and have adequate socialization opportunities along the way(Niemann, 1994).

Even though the advantages of the behavioral treatment are numerous, the families of autistic children continue to search for additional means of dealing with this neurological disorder. They are constantly engaged in a desperate search for any new method that claims to work. The parents will turn to various types of traditional and non-traditional treatments in the hope of increasing their youngster's appropriate behaviors. Other intervention methods have included language and communication therapy, auditory integration training, and the use of the vitamin B6 with magnesium supplements. Controversial means of intervention include the use Ritalin and facilitated communication. Ritalin is the most widely prescribed medication for autistic children, however, because there have been no double blind controlled studies, it is difficult to verify its effectiveness. Facilitated communication is considered controversial because of the failure of appropriately controlled studies to show evidence of its efficacy, but has attracted many adherents. With this method, the non-verbal child is provided a computer as a means of communicating.

The research literature on facilitated communication illustrates the vulnerability of the autistic population to oversold, unsubstantiated treatment methods. Much of the debate revolving around facilitated communication concerns whether autistic subjects are actually the source of the message conveyed. Controlled research using double and single

blind procedures have shown that without the assistance of the facilitator, the disabled individual is unable to respond accurately. Therefore it can be assumed that the responses are actually controlled by facilitators and not in fact by the disabled individuals.

High quality Internet sites for parents of children with autism can help them to evaluate new treatments appropriately. Sites can also be a source of valuable peer support. Autism is very rare; the Internet can facilitate large numbers of similarly affected families join together to advocate for their children's needs and to share suggestions about methods that work in managing the behavioral problems associated with autism.

Common Discipline Problems

Parenting in today's fast-paced, rapidly changing society can be a confusing and stressful experience. Societal factors including challenges to the traditional notion of motherhood and fatherhood have exposed contemporary parents to a variety of child-rearing methods. In response to such changes, parents are looking to others for reassurance and advice on child rearing. "In a recent survey of 413 parents of infants and toddlers, over half reported that they needed help in dealing with stress and someone to talk with about child-rearing problems" (O'Brien, 1997). Increasing mobility has reduced access to traditional sources of support for parents, especially the extended family. Reduced regular participation in formal religious organizations has also eliminated one formerly important source of advice and reassurance for many modern-day parents.

Since children respond optimally to different parenting strategies at different ages, parents are engaged in an ongoing experiment with various interventions aimed at helping their child discover satisfying ways to develop competence and confidence that do not infringe upon the rights of others. Like all good experimenters, parents are eager to find ways of assessing the outcome of their efforts, and to evaluate the consequences of their choices.

While feedback from children provides an important indication of parenting success, normal variations in children's moods and their inevitable dissatisfaction with certain reasonable limits makes it problematic to rely solely on children's happiness in measuring parental effectiveness. Similarly, while parents can use their own sense of happiness as an index of their effectiveness in parenting, expected fluctuations in affect can make self referencing unreliable.

Evaluating one's effectiveness as a parent is generally quite difficult in a social vacuum. Gauging the appropriateness of the rules one establishes, and the means of enforcing boundaries one uses, is impossible without a frame of reference. Since one of the main goals of child rearing is socialization, others' opinions about the acceptability of one's children's behavior provides valuable, relevant information.

While formal parenting effectiveness training programs offer one strategy for filling the social void created by rising mobility and falling religious service attendance, many

parents are reluctant to commit themselves to structured educational programs. Some find the time commitment burdensome; since two-paycheck families are now the norm, most families with children find time to be scarce. Some are uncomfortable focusing directly on parenting issues because they find the process to be threatening. Others are concerned that participating in such programs may imply inadequacy in what most parents describe as their most important role. For these reasons, many parents chose to obtain the advice and support they need via other, more informal avenues.

There are several different avenues parents can take in order to obtain parenting information; these include friends and other family members, physicians, books and magazines, and the Internet. Traditionally, basic information concerning child rearing came primarily from friends and family, while physicians' advice focused primarily on any special, physical needs of the child. However, with the advancement of technology came changes in the expectations of good parents. This resulted in increasing demands for assistance with psychological and behavioral issues pertaining to child rearing.

Health Problems

Eating Disorders

Today's society places a large emphasis on physical appearance. People have to look a certain way in order to gain respect from society. If they differ from the ideal image portrayed by the media, they are considered deviants from the norm. As little as thirty minutes of television can have a negative impact on body shape perceptions of late adolescent women (Myers & Biocca, 1992).

The recent outburst in the media of models who are frail looking is tremendous. Many advertisements consist of women who are extremely thin and emaciated. This image is much different from the outward appearance of the majority of the members in society.

According to a recent study (Stice et al., 1994), media exposure has a direct impact on eating disorder symptoms and indirectly affects the audience through gender role endorsement, ideal-body stereotype, internalization, and body satisfaction. It was shown that internalization of sociocultural ideals of thinness has caused an increase in the rate of eating disorders.

Williams (1992) says many women are unhappy with their appearance because the cultural ideal of female models is on average 9% taller and 16% slimmer than the average United States woman. Society seemingly places these models on a pedestal. Their body shape is unattainable for the majority of society, but yet still idealized. This idealization is the main contributor to the development of eating disorders. Women perceive their own body figure to be heavier than the figure they perceive as ideal or as most attractive to men (Joiner & Kashubeck, 1996).

Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorders have become

predominant in American society. There has been a steady increase in the prevalence and incidence rates in adolescents in the past decade. The prevalence rate is 1-4% of upper-class adolescents and young adults (American Psychiatric Association, 1993a). In a study by Gross and Rosen (1988) anorexia or bulimia affects 3-10% of those within the general population of American adolescents.

Anorexia and Bulimia are often linked to a drive for the perfect body. This desire usually begins at an early age. The predictors of eating disorders are low self-esteem and high levels of anxiety (Canals et al., 1996). The majority of people with eating disorders are women, but recently more men are being diagnosed. It has been revealed that there is a significant relationship between family environment and those at risk for developing an eating disorder (Felker & Stivers, 1994). Typically, though not exclusively, people with eating disorders come from families where there is a lack of parental care or empathy (Cole-Detke & Kobak, 1996). Parental socioeconomic status, body size, and childhood environmental circumstance are all factors in a child's perception of self-image (Greenlund et al., 1996).

Often, these women have been sexually, physically or verbally abused (Laws & Golding, 1996). Society may set unrealistic goals for people, leaving these people to create unrealistically high standards for themselves. People who are prone to eating disorders see this standard and try to achieve it. Focusing on looks gives them a territory where they can have some control; making food the enemy gives them a sense of power in a society that equates thinness with attractiveness (Cole-Detke & Kobak, 1996). The irony, of course, is that an eating disorder makes them feel more out of control than ever, because it is a way of avoiding their real problems and those problems run deep. Imagine the mental pain someone must be in to feel she deserves to afflict such damage upon her own body.

Women with bulimia are more likely to admit they have a problem because their secret rituals are deeply disturbing to them. Anorexic women, on the other hand, usually deny the severity of their illness. Starvation brings on physiological and emotional changes that make it increasingly difficult for them to view their bodies realistically, therefore the disorder becomes more entrenched. Many women say they know they need to eat more, but in the next breath will refuse a chair in group therapy because they have calculated that standing uses a few more calories than sitting. Of women who have an eating disorder, only 50% recover. More than 10% of the people hospitalized for anorexia will die- from starvation, cardiac arrest, electrolyte, imbalance, or suicide.

Interestingly, the widely held belief that eating disorders are most prevalent among white, upper class, well educated women is being questioned. (Gross & Rosen, 1988; Rosen et al., 1988; Snow & Harris, 1989). Root (1990) found women of ethnic minorities feel more pressures from mainstream society because of economic and sociopolitical factors. In fact, Dolan (1991) found eating disorders even more prevalent in ethnic minority women who had been exposed to Western society compared to those women who had not had this exposure.

With the high prevalence of eating disorders, many people are turning to the Internet to decide if they are suffering from one. With the Internet rapidly gaining popularity as a

source of information, it is easy to assume that victims of eating disorders can gain information. People are also looking for information to learn how to help someone who is suffering from an eating disorder. It is important to remember the highly effective manner in which a person to person contact operates. While the Internet is a wonderful resource for information, it may be best used in conjunction with another source. What we hope to determine is exactly what kind of information is on the Internet about these disorders and if the information available will provide the help the readers are looking for.

Chemical Dependence/Substance Abuse

Substance abuse is a common problem in the United States. Most Americans at some point in their lives behave in ways that are characteristic of substance disorders, which include the abuse of depressants, stimulants, opiates, and hallucinogens. These disorders are responsible for the death of 500,000 Americans each year. (Durand & Barlow, 1997)

There are currently two models to explain substance abuse; the moral weakness model and the disease model of dependence. The moral weakness model sees substance abusers as lacking the responsibility to control their use of substances. The disease model sees substance abuse as a physiological disorder. The implications that stem from these two models lie at opposite poles. The moral weakness model rests the blame for abuse problems on the abuser, whereas the medical model absolves the abuser of responsibility. (Durand & Barlow, 1997, 361)

Unfortunately, mainstream society is seemingly more likely to support the moral weakness model. As a result, obtaining help for these problems involves various social stigmas. As an example, think of the ramifications for a pharmacist that carries the label "substance abuser". This makes it necessary for abusers to seek private methods of obtaining treatment. Common treatment methods involve public contacts, with one or many. Many successful treatment methods (including Alcoholics Anonymous) involve attending group meetings, which requires a relatively high level of acceptance of the substance abuse problem. The Internet provides new ways of accessing treatment in a private manner. Individuals, provided that they have access to the web, may seek information on the Internet. Informative pages, treatment center advertisements, and on-line counselors and support groups are readily available to those who possess some computer skills.

The Internet, however, is not without its faults. The ability to post information on the Web is available to virtually anyone. This allows for false and inaccurate information to surface and be passed on to other web users. Since there is no form of regulation, there is no way to decipher helpful information from detrimental information. As a result, the quality of information varies widely. It is the goal of this research to evaluate the psychological help resources on the Internet that pertain to chemical dependency. It is an attempt to separate the high quality sights from the low quality sights.

HIV/AIDS

AIDS (acquired immune deficiency syndrome) was first reported in the United States in 1981 and has since become a major worldwide epidemic. AIDS is caused by the human immunodefiency virus (HIV) which attacks the immune system. Through the killing or impairing of cells in the immune system, HIV progressively destroys the body's ability to fight infections and certain cancers. Individuals diagnosed with AIDS are susceptible to life threatening diseases called opportunistic infections, which are caused by microbes that usually do not cause illnesses in healthy people. Since the discovery of this disease more than 390,692 people have been reported to the Center for Disease Control and Prevention (CDC) as having died as the result of acquiring this infection.

HIV can enter the body by one of four methods. The most common way is through sexual intercourse with an infected partner. During intercourse the virus enters the body through mucous membranes (the lining of the vagina, vulva, penis, rectum, mouth or throat). The second most common method of contracting HIV is through contact with infected blood. Prior to the screening of blood for evidence of HIV infection and before the heat treating techniques used to destroy HIV in blood products, HIV was transmitted through transfusions of contaminated blood or blood components. Today, the risk of acquiring HIV from such transfusions is extremely small. HIV is also spread among injection drug users by the sharing of needles or syringes contaminated with minute quantities of blood from someone infected with the virus. Fortunately, transmission from patient to health-care worker or vice-versa via accidental contact with contaminated needles or other medical instruments is rare. While there is no evidence to prove that HIV can be transmitted through saliva, tears or sweat, it can be transmitted from a woman to her fetus during pregnancy and also through the process of breast feeding (http://www.gmhc.org/stopping/basics.html#what is aids, 1998).

Many people do not develop symptoms when they first become infected with HIV. Some people, however, have a flu like illness within a month or two after exposure to the virus. They may have fever, headache, malaise and enlarged lymph nodes (organs of the immune system). These symptoms usually disappear within a week to a month and are often mistaken for those of another viral infection. Opportunistic infections common in people with AIDS cause such symptom as coughing, shortness of breath, seizures, dementia, severe and persistent diarrhea, fever, vision loss, severe headaches, wasting, extreme fatigue, nausea, vomiting, lack of coordination, coma, abdominal cramps, or difficult or painful swallowing.

More persistent or severe symptoms may not surface for a decade or more after HIV first enters the body in adults, and within two years in children born with HIV infection. This period of " ASymptomatic" infection is highly variable. Some people may begin to have symptoms within a few months; whereas, others may be symptom free for more than ten years. Whether or not symptoms are present, HIV is actively infecting and killing cells in the immune system. HIV's effect is seen most obviously in a decline in the blood levels of CD4 + T cells--the immune system's key infection fighters. Researchers continue to

examine these cells and are attempting to further understand the relationship between the infection and the immune system. As a result of such research the CDC in 1993, revised its definition of AIDS to include all HIV-infected people who have fewer than 200 CD4 + T cells. Still not all people with less then 200 CD4 cells experience symptoms; however, the number of CD4 + T cells in non-infected adults is usually over 1000 (http://www.niad.nih.gov/factsheets/aidsstat.htm). Due to the variance in symptoms and time of onset AIDS is often difficult to detect without specific medical screening.

Although the prognosis of AIDS differs from individual to individual, there is no doubt that it affects the lives of millions of people worldwide. As of the end of 1997, an estimated 30.6 million people worldwide--29.5 million adults and 1.1 million children younger then 15 years of age were living with HIV/AIDS. While no one group has been immune from the inception of the HIV/AIDS epidemic, African Americans and college students are two groups which have increased in incidence.

Of the cases of AIDS reported in the U.S., 45 percent were African Americans, which accounted for over two and a half times that of the community's representation in the general population (Robenstine, 1995). This could be explained by the fact that as one half of the African-American population live in inner cities, in areas with pervasive poverty, poor schools and inadequate social services, it is generally accepted that these scarce resources are correlated with decreased access to health education and health care. This, in turn, results in increased risk of disease.

With regard to the rise in incidence among the college student population, the risk of sexual transmission of HIV extends to college students for a variety of reasons. Most college students are sexually active, and many engage in sexual activity with multiple partners in a serial monogamy pattern. Also, many students who have sexual intercourse while under the influence of alcohol or drugs, are more likely to not use condoms (Sanderson & Jemmott). Although college students are clearly at risk for acquiring STDs and HIV, it is difficult to motivate students to change their behavior because of their commonly held belief that they are invulnerable and that AIDS does not present a realistic threat to them on their campuses.

Much has been done to combat the war on AIDS among the diverse populations across the world. One prevention method has been a widespread campaign for the use of condoms among sexually active individuals. Condoms drastically reduce the risk of contracting HIV. In Thailand a program called 100 percent condom campaign was instituted to promote safer sexual encounters in commercial sex establishments. This program consisted of the distribution of condoms to brothel and other sex establishments in addition to an enforcement program to make sure that there was compliance. As a result, since 1991 there have been sizable changes in the sexual behavior of adolescents and young men in Northern Thailand. There has been a notable increase in the use of condoms within sexual relationships between these men and sexual workers (Nelson, 1996). This safer sex practice has influenced a reduction in the contraction rates of HIV infection and other sexually transmitted diseases. This drastic lowering of the high rates of HIV infection in a general population of heterosexual adolescents and young men in a span of a few years after their

first sexual activity is unmatched.

In addition to the basic prevention method of distribution of condoms, programs dealing with conditions and behavior training have been developed as well to reduce the spread of HIV. One study, for example, involved social cognitive theory, the theory of planned behavior, and the construct of perceived behavioral control. In this study 136 college students were randomly assigned to one of two HIV risk-reduction interventions including communication skills training vs. technical skills training or to a waiting list control group. Within this study the attitudinal, intentional, and behavioral effects of a communication skills self-efficacy intervention and a technical skills self-efficacy intervention, and a waiting list control were compared (Sandreson & Jemmott, 1996). In addition, the relationship status of the students moderated the effectiveness of the HIV risk-reduction interventions; students involved in a steady dating relationship were more likely to increase their use of condoms. The data displayed that those who participated in the intervention program had higher condom use, more positive attitudes, and greater intentions to use condoms in comparison to control groups.

An abundance of research on HIV infection has been conducted by NIAID-supported investigators including the development and testing of HIV vaccines and new therapies for the disease and some of its associated conditions. Over a dozen HIV vaccines are being tested in people and many drugs for HIV infection or AIDS-associated opportunistic infections are either being developed or undergoing testing. In addition, researchers are investigating the manner in which HIV damages the immune system. This research suggests new and more successful targets for drugs and vaccines.

Within the population of individuals infected with HIV and those who are close with them, having access to information and support associated with HIV is helpful as well as comforting. With the relatively recent outbreak of AIDS across the world, the timeliness of the creation and expansion of the Internet and the information that it provides can be of great use to these individuals and provide such aid and comfort. Since however, the quality of such information is greatly varied it is important to obtain an understanding of the standards of what is available on the Internet. In rating different aspects of the quality of these sites, individuals searching for information on HIV will gain a perspective on the value of what these have to offer.

Common Emotional Disorders

Anxiety Disorders

Among the wide range of psychological disorders that plague the lives of many people, Anxiety disorders are the most prevalent, anxiety disorders are disturbances characterized either by manifest anxiety or behavior patterns aimed to warding off anxiety. The disorders which comprise anxiety disorders include panic disorder, generalized anxiety disorder, phobias, obsessive compulsive disorder, and post-traumatic stress disorder. Panic disorder involves recurrent, unexpected panic attacks followed by psychological or behavioral

problems. Generalized anxiety disorder is associated with excessive worry about several life circumstances over a period of at least six months. It is associated with an earlier and more gradual onset than most other anxiety disorders (Brown, Barlow, & Liebowitz, 1994). Phobias involve intense and persistent fear of some object or situation, which as the person realizes, actually poses real threat, and avoidance of the phobic stimulus. Obsessive compulsive disorder is comprised of obsessions, based upon thoughts and images which keep intruding into a person's consciousness; the person finds the thought inappropriate and distressing, and tries to suppress it, but it still returns. Compulsions are actions that a person feels compelled to do repeatedly though he/she has no conscious desire to do so. Post-traumatic stress disorder is a severe psychological reaction to intensely traumatic events, lasting at least one month.

The common bond of these disorders is their involvement with anxiety, a state of fear and apprehension that effects many areas of functioning. In the typical life of a person unaffected, occasional thoughts and encounters with fear can be highly unpleasant and disturbing. The life of a person with an anxiety disorder can be severely distressing as a result of high intensity, active fears. In order for one to combat this uncomfortable experience, successful treatment is mandatory.

Popular treatment options include drug therapy and counseling. In drug therapy a psychiatrist will prescribe one of the many drugs according to the needs of the individual and characteristics of the disorder. One classic counseling option is systematic desensitization (Wolpe, 1958). This involves the patient creating a hierarchy of fears, which is a list of increasingly anxiety-arousing situations. Clients are then taught muscle relaxation techniques, which are then applied to the hierarchy anxiety provoking situations. Eventually clients should be able to apply these techniques, across all anxiety arousing situations and remain in a relaxed state. In the treatment of phobias and obsessive compulsive disorder the therapist will, many times, integrate this type of exposure with modeling (Alloy, Acocella, & Bottzin, 1996).

Obsessive compulsive disorder provokes specific interest because the presentation of compulsions often appears mysterious and confusing. The need for an individual to perform a compulsion may evoke a great deal of embarrassment. Often painstaking effort is made to conceal display of the compulsions. The result is a relatively severe impairment of social functioning (Koran, Thienemann, & Daventport, 1996).

Obsessive compulsive disorder normally evolves in late adolescence or early adulthood. Men and women are equally at risk for having the disorder. Young, single men are more likely to have checking rituals and married women are likely to posses cleaning rituals (Alloy, Acocella, & Bottzin, 1996).

Like other anxiety disorders, obsessive compulsive disorder can be treated with systematic desensitization and drug therapy. Drugs that are typically employed in the treatment of OCD include Anafranil, Prozac, and Paxil. These drugs modify the anxious symptomatic behavior and can be used in combination with systematic desensitization.

Severe Mental Illnesses

Those with severe mental illnesses present psychology and psychiatry with their biggest treatment challenges. The greatest savings in behavioral healthcare come from being able to reduce the use of inpatient care. In reaction to the reputed abuse and overuse of inpatient programs for adults and adolescents who abuse substances, there is a trend toward greater reliance on outpatient approaches. With more provision of community-based services to this population, development of high quality sites on the Internet is becoming increasingly important. Helping those with severe mental illness to make effective use of their leisure time is critical; symptoms are most common during periods when people are not otherwise occupied (Csikszentmihalyi, 1997).

People enter an optimal state that Csikszentmihalyi (1990) termed "flow." Csikszentmihalyi discovered that happiness comes not from mindless passivity but from engagement in mindful challenge. Research findings suggest that many people get depressed when they are alone, and that they revive when they rejoin the company of others. The moods that people with chronic depression experience are indistinguishable from those of healthy people, so long as they are in company and doing something that requires concentration. But when they are alone with nothing to do, their minds begin to be occupied by depressing thoughts, and their consciousness becomes scattered.

Most people assume that no skills are involved in enjoying free time, and that anybody can do it. However, considerable evidence suggests that the opposite is true. Free time is more difficult to enjoy than work. Apparently our nervous system has evolved to attend to external signals, but has not had time to adapt to long periods without obstacles and dangers. Unless one learns how to use this time effectively, having leisure at one's disposal does not improve the quality of one's life (Csikszentmihalyi, 1997).

Retirees frequently are surprised by the challenges that this new unstructured phase of life presents. Without the work week to offer a counterpoint, endless morning of being free to sleep late loom dismal. For many, finding volunteer work or a structured hobby is necessary for happiness. Such activities provide social contact, provide a sense of meaning and purpose, and help to define leisure periods in pleasant terms through a contrast effect.

The cruel irony is that we generously provide endless hours of hard-to-enjoy leisure time to those with severe mental illnesses. These people frequently lack the talent for worry-free musing, and also lack the financial resources to underwrite expensive hobbies that might otherwise offer a helpful distraction. Developing ways to cope constructively with free time is a major challenge for many of the individuals. Improving access to community resources, providing psychoeducation about medication compliance, and adapting therapy workshops and treatment approaches to reflect the experience of severely mentally ill consumers, can dramatically improve their functioning and reduce relapse risk (Haywood, et al, 1995; Sullivan et al, 1995). Internet sites provide a potentially valuable resource for individuals diagnosed with severe mental illness, and those who care for them.

Schizophrenia

Schizophrenia is a disturbance that lasts for at least 6 months and includes at least 1 month of active phase symptoms. The patient must have three or more of the following: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, etc. These signs and symptoms are associated with marked social or occupational dysfunction. The characteristic symptoms of schizophrenia involve a vast number of cognitive and emotional dysfunctions as well that include perception, inferential thinking, language and communication, behavioral monitoring, affect, fluency and productivity of thought and speech, hedonic capacity, volition and drive, and attention. The diagnosis involves the presence of a variety of signs and symptoms associated with impaired occupational or social functioning.

Characteristic functions of schizophrenia fall into either of two categories - positive or negative. The positive symptoms reflect an excess or distortion of normal functions, including delusions, hallucinations, and disorganized speech. Delusions are false beliefs that involve a misunderstanding of perceptions or experiences. Persecutory delusions are most common, meaning the person thinks he or she is being tortured, followed, tricked, plotted against, spied on, etc. Hallucinations may occur in any sensory modality, but auditory hallucinations are most common. They are usually experienced as voices; threatening voices commonly persist. Disorganized thinking may appear in different ways. The person may jump from one topic to another; answers to questions can be completely unrelated; speech may be so disorganized that it is just about incomprehensible. Grossly disorganized behavior may also appear in a number of ways. Some examples include not being able to simply organize meals, maintain hygiene, dressing in an unusual and perhaps inappropriate manner, inappropriate sexual behavior (public masturbation), shouting and swearing. Catatonic behavior appears as unresponsiveness to the environment, sometimes looking as if the person is completely unaware of his or her surroundings. Other examples include maintaining a rigid posture, resistance to attempts to be moved, or bizarre postures.

The negative symptoms include affective flattening, alogia, and avolition. Affective flattening is very common and is characterized by the person's face looking unresponsive, perhaps through poor eye contact and diminished body language. Alogia is displayed by short, empty replies. Avolition is shown by an inability to initiate or participate in goal-directed activities. The person may sit for long periods of time and show almost no interest in participating in work or social activities.

Schizophrenia involves dysfunction in one or more major functioning areas (interpersonal relations, work or education, or self-care). Educational learning is usually disrupted, and the person may not be able to finish school. Many individuals are unable to maintain a job for long. 60%-70% of all individuals with schizophrenia do not marry, and also have limited social contacts. Family members report that they feel that the individual is "gradually slipping away".

Some associated features include inappropriate affect (smiling or laughing at inappropriate moments), loss of pleasure or interest, depression, anxiety, anger,

disturbances in sleep patterns, lack of appetite, psychomotor abnormalities such as pacing and rocking, inattentiveness, inability to concentrate, confusion, lack of insight, or derealization. Motor abnormalities are present and may include odd mannerisms, posturing, or ritualistic behavior.

The life expectancy of individuals with schizophrenia is shorter than those without schizophrenia for many reasons. 10% of individuals with schizophrenia commit suicide. Risk factors for suicide include being male, being under 30 years of age, depressive signs, unemployment, and recent hospital discharge. Personality disorders such as shizotypal, schizoid, or paranoid personality disorder may sometimes exist before the onset of schizophrenia.

The onset of schizophrenia usually occurs between the late teens and the mid-thirties. Onset before adolescence is rare, although cases have been reported. Schizophrenia can also begin later in life, even after age 45.

Women are more likely to have a later onset, more noticeable mood symptoms, and a better prognosis. In contrast, men are more likely to have an earlier onset, more positive symptoms, and a not-so-good prognosis.

Males and females are affected in about equal ratio, although hospital-based studies show a higher rate of schizophrenia in males. The lifetime prevalence of schizophrenia is estimated to be between 0.5% and 1%. The average age of onset is in the early to mid-20s for men and in the late 20s for women. The majority of individuals with schizophrenia display a slow, gradual development of a number of symptoms, such as social withdrawal, lack of interest in school or work, failure in hygiene and grooming, and outbursts of anger. Family members find all of this hard to deal with and may dismiss it by saying the individual is merely "going through a phase".

The first-degree biological relatives of people with schizophrenia have a risk for the disorder that is about 10 times greater than others. Concordance rates are higher in monozygotic twins than in dizygotic twins. Adoption studies have shown that adoptive relatives have no increased risk.

There are many different ideas among researchers as to what causes schizophrenia. According to the neurodevelopmental hypothesis now popular among biomedical researchers, schizophrenia is due in large part to abnormalities in the prenatal or neonatal development of the nervous system, which lead to subtle but significant abnormalities in behavior. The hypothesis holds that stressful experiences can aggravate the symptoms and that supportive relatives and friends can decrease them, but environmental factors by themselves do not cause schizophrenia.(Kalat, 434) Likewise, anatomy studies suggest that schizophrenia is caused by faulty brain development. Studies show that exposure to viral infections during the second trimester and birth complications can boost the likelihood of developing schizophrenia, because the normal development of the brain will be altered, according to Stephen Marder, M.D., of the University of California in Los Angeles.

Fortunately, the first antipsychotic drug , chlorpromazine (Thorazine) was developed in the 1950s. Since then, more than a dozen others have been made, including haloperidol (Haldol), thioridazine (Mellaril), and loxapine (Loxatane). These drugs work by blocking binding sites of the neurotransmitter dopamine. More modern

antipsychotic drugs have been developed such as clozapine (Clozaril), risperidone (Risperdal), and olanzapine (Zyprexa), which do not seem to have some of the unwelcomed side effects of some of the more conventional drugs (Patlak, 1997). Unlike the older antipsychotics, studies suggest that these three newer drugs work by affecting the neurotransmitter serotonin, as well as dopamine. (Patlak, 1997)

Once antipsychotic medications have been implemented, many patients participate in psychotherapy. According to Jack Scott, M.D., of the Maryland Research Center in Baltimore, recent studies show that supportive reality-oriented therapy aimed at developing healthy interpersonal skills is more beneficial to schizophrenics than more probing psychoanalytic psychotherapy. (Patlak, 26)

A number of factors are related to the likelihood of recovery from schizophrenic disorders. A patient has a relatively favorable prognosis when (1) the onset of the disorder has been sudden instead of gradual, (2) the onset has occurred at a later age, (3) the patient's social and work adjustment were relatively good before the onset of the disorder, and (4) the patient has a relatively healthy, supportive family situation to return to (Weiten, 1995).

Along with antipsychotic medications and behavior, cognitive, and psychotherapies, it is vital for the individual with schizophrenia to have good, strong support systems surrounding them, consisting of family, friends, and even the community. There are many opportunities to take advantage of in the community, like support groups that you read about in the church bulletin or the newspaper. These solutions are out there. If these individuals do not like to look to their community, then there are solutions for them right inside the home on the Internet. There are online support groups consisting of individuals who also have the same illness, who they can share similar experiences with. Through this type of communication, these individuals get to accumulate helpful information and perhaps help others, without all of the embarrassment of meeting face-to-face. It is a lifesaver for some, but any individuals using the Internet, especially as a life-support, should be extremely cautious. There is absolutely no censorship or guidelines in creating a webpage. Anyone can, and that means that there are some people that are creating WebPages about mental disorders that are giving false information, maybe even damaging information. Since schizophrenics are sensitive to their environment and surrounding support groups, there is obviously a need for Internet censorship.

Bipolar Disorder

Bipolar Disorder (manic depression) is a serious affective disorder that affects roughly 1% of the population. Evidence strongly suggests an inherited predisposition to the disorder. Mood stabilizers (Depakote and lithium carbonate) are an integral part of treatment for most of these consumers. However, adverse side effects contribute to poor rates of medication compliance among many patients diagnosed with bipolar disorder. Haywood, Kravitz, Grossman, Cavanaugh, Davis, and Lewis (1995) found that

medication noncompliance was the single best predictor of the "revolving door" phenomenon among patients with schizophrenic, schizoaffective, and affective disorder. This finding was corroborated by a study by Sullivan, Wells, Morganstern, & Leake (1995) comparing 101 recently rehospitalized schizophrenic patients with a matched sample of 101 previously hospitalized patients who had been stable in their communities. Medication noncompliance, alcohol abuse, and hostility of informants toward the patient were related to greater risk of readmission. By contrast, overall quality of life, type and extent of services used, and access to care did not predict rehospitalization. Results from both of these studies suggest that patient education promoting medication compliance and abstinence from psychoactive substances seem to be critical to breaking the cycle of multiple hospitalizations.

Method

Source and researchers

Evaluations were conducted on a total of 775 web sites addressing the needs of four different target populations with psychological or behavioral health-related problems, including those with Parenting Problems (ADHD, Tourette's syndrome, Autism, and Common Discipline problems), Health Problems (Eating Disorders, Chemical Dependency, and HIV), Common Emotional Disorders (Anxiety Disorders and Depression), and Severe Mental Illnesses (Schizophrenia and Bipolar Disorder). The sites were chosen randomly from various common search engines on the Internet. 18 trained undergraduate psychology majors from a small liberal arts college on the east coast completed the evaluations. After a period of training in the psychological problem areas, each rater evaluated roughly 25-75 sites, pertaining to one of the four categories. After the initial ratings, a sample of randomly chosen sites were reassigned to a second evaluator, in order to permit assessment of interrater reliability.

Materials

Several computers linked to the Internet served as tools for access to the Internet. A standardized evaluation form assessing 6 separate dimensions was used to record the ratings for each site along with some demographic information. Evaluators were asked to rate how well each site provided the following: 1) clear and accurate information 2) "how-to" suggestions for change: practical exercises 3) destigmatizing information; promotion of normalization 4) promotion of a sense of belonging; information to help combat loneliness 5) referral mechanisms, if users found that additional help is needed and 6) outcomes assessment; feedback mechanism.

The 775 web sites were evaluated on the 6 dimensions using a 5-point scale ranging from zero to four. A zero was given for absent information, one indicated extremely inadequate, two indicated somewhat inadequate, three indicated somewhat adequate, and four indicated the presence of outstanding information. The sites were evaluated over a period of six weeks.

Results

One-way ANOVA on the 6 separate items and the summary scores revealed significant differences in quality ratings across the four target categories ($p<.001$; $F = 16.5$; df + 3,771). Sites addressing the needs of parents consistently received higher ratings, and sites targeting the "worried well" consistently received the least strong endorsements. Sites addressing health-related concerns and severe mental illnesses received moderate ratings. The prevalence of commercial motivation affecting sites targeting the worried well seems to have compromised the quality of many of these sites. In comparison, the motivation behind many of the sites developed to assist parents seems more compassionate and less exploitative; the quality of information offered by these sites seemed to be less distorted by a marketing agenda.

Overall, the ratings suggested that the average quality of the current sites was not very impressive. The mean rating across problem topics for all site dimensions was 2.27 (s.d. = .97) on the 0-4 point scale where 0=absent, 1=extremely inadequate, 2=somewhat inadequate, 3=somewhat adequate, and 4=outstanding.

Interrater reliability during the initial phase of data collection was somewhat disappointing ($r = .64$, $p<.01$). The reaccess rate in the second evaluation trials was also disappointing (65% after only one month's time). This suggests that the operation of many current sites is unreliable.

In order to enhance consistency across raters, additional training of rater was conducted prior to the second phase of data collection. This training was associated with significant improvement in consistency of evaluation technique. Interrater reliability for the second phase was .85 ($p<.01$), and the overall reliability for all cases was .75 ($p<.01$).

Discussion

In general, it is believed that parents are instinctively inclined to seek immediate help for their children . It is also believed that many parents possess a moral obligation to their young, which drives them to great lengths to ensure their well being. It is hypothesized that these as well as other beliefs, provide some reasons as to why the sites regarding the needs of parents received such high ratings. We can also reason that the high scores are a result of referral mechanisms that takes place from parents to parents, friends to friends, and so on. With this in mind, it stands to also reason that the high demand for such information is supported by the incredible number of available sites with the same, or similar topic, and the consistency of information among many of the sites.

With more sites provided for the needs of parents than there are sites for the worried well, it is hypothesized that the demand for that category is not as great. Low demand for help and information with the worried well may be a factor of a low referral mechanism. Furthermore, in comparison to the population of parents who seeks help, the worried well category is much smaller in size. With regards to the quality of the information, as to why the information on those sights were given low ratings, it is hypothesized that there is a direct relationship between demand and quality. Therefore, it

stands to reason that, since there were fewer sites to judge, the results are based on a smaller scale than that of the parent needs category.

The moderate ratings for the severe mentally ill and health related sites are somewhat of a mystery. A possible explanation could be due to the difficulty level of obtaining information for the categories. It is also possible that the difficulty in obtaining information for these categories may have forced some individuals to place either incorrect, or incomplete information on their sites. Similarly, with the destigmatizing information category because parenting problems tend to be more common and accepted, the scores for the destigmatizing information category would most likely automatically be higher.

Most electronic information found on psychological disorders is organized into specific web sites. Research takes a considerable amount of time and research facilities often have limited hours; however, these sites can be used by anyone whom has access to the Internet through a computer.

Although the information available on these sites varies in quality and quantity, it provides many advantages for its users. Web sites provide information on prevalence, treatment and often-detailed descriptions of symptoms on specific disorders. Those suffering from Anxiety Disorders are able to easily find organized information in the privacy of their own homes. Web sites are generally used as starting point of research. Often other Internet services, such as interactive lists are recommended as additional aides from these sites. Interactive lists provide patients with cutting edge information on treatments and current research on the disorder. In addition they are distributed globally, allowing many perspectives on the disorder to reach individuals (Allan & Kostenbader, 1995). Subscription to these lists is usually cost free and provides subscribers with the option of asking professionals questions on various issues.

Perhaps the most useful online services are the discussion groups for specific disorders. Through subscription to an on-line carrier, those suffering from Anxiety Disorders can receive support from their peers via computer. This service is especially helpful to those inflicted with Agoraphobia. The main symptom of this disease is a fear of being in any situation or place from which escape or help would be unavailable in the event of panic attack. As a result, agoraphobics are often unable to leave their home for weeks or months at a time and seldom keep appointments with therapists. This inhibits their ability to seek treatment and support from others. On line support groups eliminate this fear while helping individuals to cope with their problems in a familiar environment.

The Internet also provides many general advantages when compared to traditional treatment methods. Embarrassment and cost of treatment are common obstacles for those individuals suffering from mental health disorders. Many people are fearful of others knowing that they suffer from what they consider to be odd symptoms. The confidentiality established through the use of a computer can greatly reduced this fear. Those individuals that are unable to receive treatment because of the high price of healthcare are also within reach of treatment, through the Internet. Many sites and groups provide information on low cost or free mental health care. In addition, the use of Internet provides access with minimal cost .

The Internet is a useful and accessible tool for providing mental health care; however, specific goals and standards for its use must be met. Managed care organizations

are already investigating means for reducing costs through computerized-based medical education, and such forces will further encourage the development of networked information resources (Huang & Alessi, 1996). By anticipating the potential abuses of the Internet by the health care systems, professional associations must assure that the information highway helps rather than harms clients. Although it would be beneficial for clients to be as knowledgeable about their disorder as their therapists, inaccurate and inappropriate information could be detrimental to the outcome of their treatment. The validity of data delivered via computer networks needs to be screened prior to patient and public exposure (Sampson, Kolodinsky & Greeno, 1997). Conversely, counselors need to be educated and trained in administering this treatment. With this advance in technology in combination with therapist information, support groups and interactive lists, treatment can be accessed at the flip of a switch.

Table 1

		N	Mean	Std. Deviation
promote belonging	TS,ADHD,Autism,Parenting Prob	300	2.1933	1.4594
	Eating disorders,Chemical Dep, HIV	210	2.0000	1.6456
	Anxiety Disorders,Depression	157	1.6115	1.4485
	Schizophrenia,Bipolar	108	1.9722	1.6770
	Total	775	1.9923	1.5527
pratical suggestions for change	TS,ADHD,Autism,Parenting Prob	300	2.0333	1.5622
	Eating disorders,Chemical Dep, HIV	210	1.8667	1.6373
	Anxiety Disorders,Depression	157	1.0701	1.1989
	Schizophrenia,Bipolar	108	1.8611	1.6203
	Total	775	1.7690	1.5650
feedback mechanisms	TS,ADHD,Autism,Parenting Prob	300	1.8567	1.6730
	Eating disorders,Chemical Dep, HIV	210	1.8714	1.6450
	Anxiety Disorders,Depression	157	1.0955	1.2236
	Schizophrenia,Bipolar	108	1.8889	1.7094
	Total	775	1.7110	1.6168
clear and adequate info	TS,ADHD,Autism,Parenting Prob	300	3.1400	1.1423
	Eating disorders,Chemical Dep, HIV	210	2.9952	1.3033
	Anxiety Disorders,Depression	157	2.3121	1.2499
	Schizophrenia,Bipolar	108	2.6296	1.3506
	Total	775	2.8619	1.2780
promote normalization	TS,ADHD,Autism,Parenting Prob	300	2.3667	1.3509
	Eating disorders,Chemical Dep, HIV	210	1.5143	1.8924
	Anxiety Disorders,Depression	157	1.7707	1.2703
	Schizophrenia,Bipolar	108	2.0093	1.5678
	Total	775	1.9652	1.5693
referral mechanisms	TS,ADHD,Autism,Parenting Prob	300	2.5533	1.5346
	Eating disorders,Chemical Dep, HIV	210	2.2810	1.6607
	Anxiety Disorders,Depression	157	1.8726	1.3762
	Schizophrenia,Bipolar	108	2.1759	1.6339
	Total	775	2.2890	1.5714

Table 2

		Sum of Squares	df	Mean Square	F	Sig.
promote belonging	Between Groups	34.951	3	11.650	4.906	.002
	Within Groups	1831.003	771	2.375		
	Total	1865.954	774			
pratical suggestions for change	Between Groups	100.577	3	33.526	14.400	.000
	Within Groups	1795.079	771	2.328		
	Total	1895.657	774			
feedback mechanisms	Between Groups	74.658	3	24.886	9.847	.000
	Within Groups	1948.599	771	2.527		
	Total	2023.257	774			
clear and adequate info	Between Groups	80.220	3	26.740	17.412	.000
	Within Groups	1184.007	771	1.536		
	Total	1264.227	774			
promote normalization	Between Groups	97.200	3	32.400	13.810	.000
	Within Groups	1808.860	771	2.346		
	Total	1906.059	774			
referral mechanisms	Between Groups	49.577	3	16.526	6.844	.000
	Within Groups	1861.680	771	2.415		
	Total	1911.257	774			

Appendix A

The Explosion of Psychological Help on the Net

Electronic Behavioral Healthcare

I. Information regarding treatment and research
cutting edge, state of the art, expert information for consumers, breaking down the barriers between consumers and experts; NAMI

Opportunities for "passive" learning
A. Web sites
B. Listserv groups

II. Interactive electronic treatment

Opportunities for "active" learning
A. Support groups
B. Expert mediational groups

III. Referral to in vivo Psychotherapy

IV. Outcome Evaluation: Follow up mechanisms & tracking usage
A. What is lost without face-to-face contact?
B. What is lost without continuity of a real relationship?

V. Issues
A. Privacy
B. Accessibility
C. Potential for abuse, exploitation

VI. Model of Ideal Electronic Resources
A. Clear & accurate information
B. How to-suggestions for change; practical exercises
C. Destigmatizing information; promotion of normalization
D. Promote sense of belonging; combat loneliness
E. Referral mechanism-if additional help is needed
F. Outcomes assessment; feedback mechanism

Rater____
Resource_____

Evaluation of Electronic Helping Resources

Use the 5-point scale described below to evaluate the resource on each of the following dimensions.

0 = absent
1 = extremely inadequate
2 = somewhat inadequate
3 = somewhat adequate
4 = outstanding

_____ A. Clear & accurate information

_____ B. How to-suggestions for change; practical exercises

_____ C. Destigmatizing information; promotion of normalization

_____ D. Promote sense of belonging; combat loneliness

_____ E. Referral mechanism-if additional help is needed

_____ F. Outcomes assessment; feedback mechanism

Evaluation Sheet
Psych Help Resources © 1998

Rater_____ Disorder_____

Site Name_____

Site Address_____

Type of Site: General Disorder Class Specific Disorder Specific Other

Site Motive: Informative Provide Help Commercial Other

Use a four-point scale to evaluate the resource on each of the following dimensions.

0 Absent
1 Extremely Inadequate
2 Somewhat Inadequate
3 Somewhat Adequate
4 Outstanding

_____Clear and Adequate Information

_____Practical Suggestions for change

_____Destigmatizing Information; Promotion of Normalization

_____Promote sense of Belonging; Combat Loneliness

_____Referral Mechanisms

_____Outcomes Assessment; Feedback Mechanisms

Evaluation Descriptions

Type of Site: example : general = "mental health site" , disorder class specific = "chemical dependency" ,disorder specific = "alcoholism" , other = written explanation.

1. Site Motive: Informative = purely passing on information, Provide Help = suggestions for change, self- help, Commercial = goal to obtain profit, Other = written description.

Clear and Adequate Information = Page is well written and easy to follow, no apparent gaps in information.

Practical Suggestions for Change = How to's ,

Destigmatizing information; Promotion of Normalization = Personal accounts, success stories, inspiration.

2. Promote sense of belonging, combat loneliness = chat lines, on-line support groups, and immediate access to others.
3. Referral Mechanisms = contacts to community groups, and other Internet sites (non-interactive) Non cyber referrals.

Outcomes Assessment; Feedback Mechanisms = counseling via the Internet only (e-mail or one on one chats with some one in a counseling position) Users access to information on own recovery rates.

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